

CLAIMS

1. A device for aiding users in gripping objects, comprising:
means for gripping objects, including at least one movable gripping member;
means for moving the at least one movable gripping member to effectuate gripping and releasing of objects;
means for controlling the moving means;
transducer means coupled to the controlling means and configured to receive input commands from the user to cause the controller means to initiate action by the moving means to move the at least one movable member and selectively grip and release an object; and
means for removably mounting the device on a user.
2. A device for gripping, comprising:
a bendable base member;
a device for sensing bending of the base member;
a gripping mechanism mounted on the base member; and
an actuation system coupled to the gripping mechanism and to the sensing device, the actuation system configured to open and close the gripping mechanism in response to bending of the base member.
3. The gripping device of claim 2 wherein the base member is configured to be mounted on a user's body.
4. The gripping device of claim 2 wherein the sensing device is integrally formed with the bendable base member.
5. The gripping device of claim 4 wherein the sensing device comprises a bendable resistor.

6. The gripping device of claim 2 wherein the gripping mechanism comprises a movable gripping member coupled to the actuation system.

7. The gripping device of claim 6, further comprising a fixed gripping member configured to cooperate with the movable, gripping member for gripping objects.

8. The gripping device of claim 2 wherein the gripping mechanism comprises two movable gripping members configured to cooperate in gripping and releasing objects.

9. The gripping device of claim 2 wherein the gripping mechanism is configured to maintain tension in the closed position.

10. The gripping device of claim 2 wherein the actuation system comprises a microprocessor coupled to an actuator.

11. The gripping device of claim 10 wherein the actuator comprises a servo motor coupled to the microprocessor and linkage coupling the servo motor to the gripping mechanism.

12. The gripping device of claim 11 wherein the linkage comprises a spring configured to urge the gripping mechanism to close.

13. The gripping device of claim 12 wherein the linkage comprises an adjustable link.

14. The gripping device of claim 12 wherein the linkage comprises a flexible link coupling the servo motor to a movable gripping member.

15. The gripping device of claim 12 wherein the linkage comprises a flexible filament coupling the servo motor to a movable gripping member.

16. The gripping device of claim 11 wherein the actuator is configured to move the gripping mechanism between an open position and a closed position in response to a binary signal.

17. The gripping device of claim 11 wherein the actuator is configured to move a movable gripping member of the gripping mechanism in stepped fashion.

18. The gripping device of claim 11 wherein the actuator is configured to proportionally move at least one movable gripping member in the gripping mechanism when opening and closing the gripping mechanism in response to bending of the base member.